

Energy in Finland
Pocketbook 2007

Finland in brief

Area

Situated in northern Europe with an area of 338,145 km² of which 78% forest, 10% water, 8% cultivated land.

Population

5.3 million, with average density of 17 persons per square kilometre. More than two-thirds of the population reside in the southern third of the country.

Natural resources

Average temperatures

| Town | Latitude | January | July |
|-----------|----------|---------|---------|
| Helsinki | 60° | -4.2°C | +17.2°C |
| Rovaniemi | 66° | -11.7°C | +14.9°C |

Economy

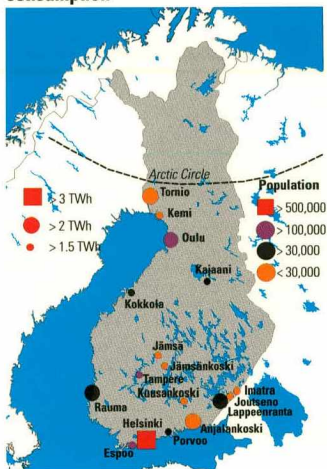
In 2006 GDP totalled € 168 bil., i.e. € 31,886/capita. In 2005 services were 65.8%, secondary production 31.3% and primary production 2.9% of the GDP.

Structure of industry,

Value added gross in production in 2005

| | bil. € | % |
|---------------------------------|-------------|------------|
| Total industry | 34.7 | 100 |
| Mining and quarrying | 0.4 | 1 |
| Wood and paper industry | 5.0 | 14 |
| Chemical industry | 3.9 | 11 |
| Metal industry | 16.2 | 46 |
| Machinery and equipment | 4.6 | 13 |
| Electrical equipment | 7.6 | 22 |
| Other metal industry | 4.0 | 12 |
| Other manufacturing ind. | 6.5 | 19 |
| Electricity, gas and water ind. | 2.7 | 8 |

Municipalities with high electricity consumption



Productive forestland is the most valuable natural resource of Finland. The indigenous energy resources in the country are hydro power, wood and peat. Finland also has some rich deposits of metallic ores from which copper, zinc, iron, and nickel are extracted.

Total energy consumption in 2006*

1,479 PJ (35.3 Mtoe)
281.4 GJ/capita (6.7 toe/capita)

Electricity consumption in 2006*

90.0 TWh
17,123 kWh/capita

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The data in this pocketbook are based on the Preliminary Energy Statistics 2006 figures.

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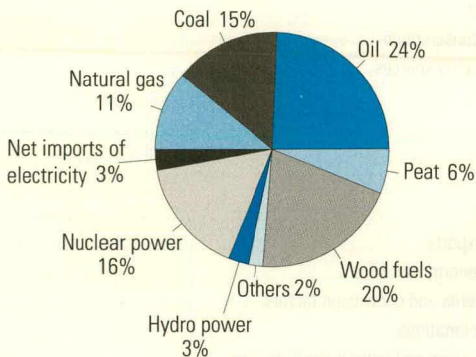
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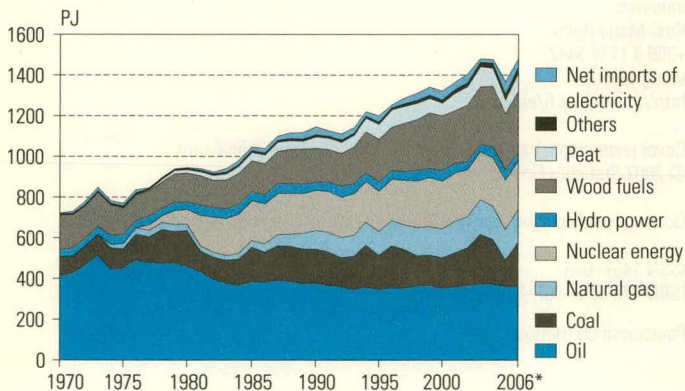
Painojussit Oy, Helsinki 2007

Total energy consumption by energy source 2006

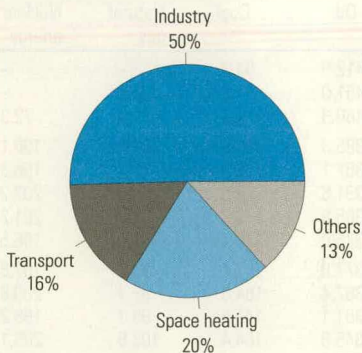


Total energy consumption in 2006* was 1 479 PJ.

Total energy consumption by energy source 1970–2006

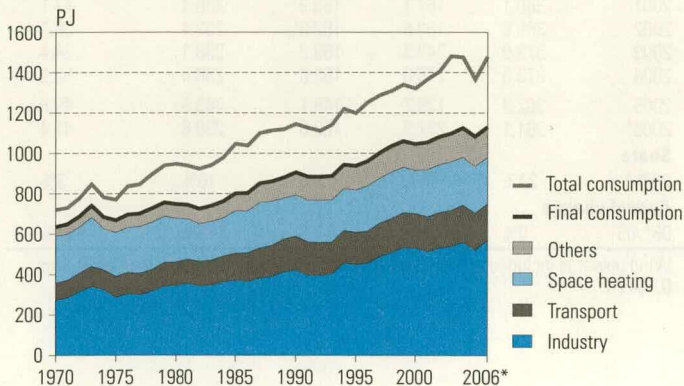


Final energy consumption by sector 2006



Final energy consumption in 2006* was 1 130 PJ.

Total energy consumption and final energy consumption by sector 1970–2006



Total energy consumption

Total energy consumption by energy source, PJ

| | Oil | Coal | Natural gas | Nuclear energy | Hydro power |
|----------------------|-------|-------|----------------|-------------------|----------------|
| 1970 | 412.9 | 94.8 | — | — | 33.9 |
| 1975 | 451.0 | 94.8 | 26.5 | — | 43.5 |
| 1980 | 460.3 | 176.2 | 32.2 | 72.3 | 36.4 |
| 1985 | 385.3 | 167.8 | 34.1 | 196.1 | 44.0 |
| 1986 | 382.1 | 147.7 | 41.3 | 196.3 | 44.2 |
| 1987 | 391.6 | 168.5 | 54.6 | 202.2 | 49.2 |
| 1988 | 385.9 | 172.7 | 58.8 | 201.2 | 47.6 |
| 1989 | 375.0 | 170.1 | 77.0 | 196.5 | 46.4 |
| 1990 | 377.8 | 167.1 | 90.8 | 197.8 | 38.7 |
| 1991 | 367.4 | 164.0 | 95.7 | 200.8 | 47.0 |
| 1992 | 361.1 | 141.5 | 99.3 | 198.2 | 53.9 |
| 1993 | 345.8 | 164.4 | 102.6 | 205.1 | 48.0 |
| 1994 | 359.2 | 205.2 | 113.3 | 199.9 | 42.0 |
| 1995 | 347.1 | 167.1 | 117.6 | 197.8 | 46.1 |
| 1996 | 356.3 | 205.5 | 123.1 | 203.8 | 42.2 |
| 1997 | 353.2 | 190.0 | 121.1 | 218.7 | 42.5 |
| 1998 | 364.6 | 147.1 | 138.7 | 228.8 | 53.3 |
| 1999 | 366.7 | 148.9 | 138.9 | 240.7 | 45.3 |
| 2000 | 353.6 | 148.4 | 141.9 | 235.4 | 52.3 |
| 2001 | 360.1 | 167.1 | 153.9 | 238.4 | 47.1 |
| 2002 | 365.5 | 183.6 | 152.9 | 233.4 | 38.5 |
| 2003 | 373.9 | 243.3 | 169.2 | 238.1 | 34.4 |
| 2004 | 373.8 | 219.0 | 163.0 | 238.0 | 53.9 |
| 2005 | 362.2 | 129.2 | 149.1 | 243.9 | 49.6 |
| 2006* | 361.1 | 217.7 | 160.6 | 239.8 | 41.4 |
| Share | | | | | |
| 2006* | 24% | 15% | 11% | 16% | 3% |
| Annual change | | | | | |
| 06*/05 | 0% | 68% | 8% | -2% | -17% |

Wind power is included in hydro power. Total amount of wind power in 2006 was 0.554 PJ.

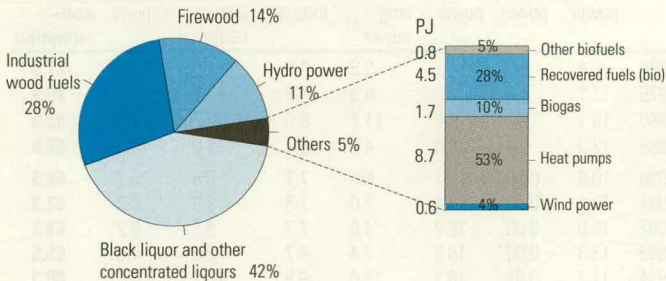
Total energy consumption

| Wood fuels | Peat | Others | Net imports of electricity | Total | |
|---------------|------|--------|-------------------------------|----------------|----------------------|
| 170.1 | 0.9 | 6.0 | 1.9 | 720.5 | 1970 |
| 130.7 | 1.7 | 7.2 | 14.4 | 769.8 | 1975 |
| 142.1 | 17.1 | 6.3 | 4.4 | 947.2 | 1980 |
| 151.3 | 41.1 | 10.3 | 17.0 | 1 047.0 | 1985 |
| 152.5 | 43.3 | 10.1 | 20.9 | 1 038.5 | 1986 |
| 158.4 | 45.4 | 10.2 | 20.1 | 1 100.3 | 1987 |
| 167.7 | 41.5 | 10.6 | 26.6 | 1 112.5 | 1988 |
| 172.0 | 39.5 | 10.5 | 31.9 | 1 119.0 | 1989 |
| 167.2 | 55.9 | 10.8 | 38.7 | 1 144.7 | 1990 |
| 158.6 | 56.4 | 10.1 | 25.9 | 1 125.8 | 1991 |
| 161.2 | 55.3 | 10.7 | 29.6 | 1 110.8 | 1992 |
| 180.5 | 58.4 | 9.9 | 27.1 | 1 141.9 | 1993 |
| 201.8 | 66.7 | 10.1 | 21.9 | 1 220.1 | 1994 |
| 207.5 | 74.3 | 11.0 | 30.3 | 1 198.7 | 1995 |
| 212.8 | 84.8 | 11.1 | 13.2 | 1 252.7 | 1996 |
| 237.2 | 83.3 | 13.3 | 27.6 | 1 286.9 | 1997 |
| 247.6 | 79.6 | 15.2 | 33.5 | 1 308.5 | 1998 |
| 273.2 | 70.5 | 15.6 | 40.0 | 1 339.8 | 1999 |
| 268.6 | 61.9 | 16.0 | 42.8 | 1 320.8 | 2000 |
| 258.9 | 85.9 | 18.3 | 35.9 | 1 365.6 | 2001 |
| 278.8 | 89.7 | 19.4 | 42.9 | 1 404.8 | 2002 |
| 284.1 | 99.2 | 21.8 | 17.5 | 1 481.4 | 2003 |
| 297.2 | 88.8 | 24.9 | 17.5 | 1 476.1 | 2004 |
| 275.3 | 68.8 | 27.1 | 61.2 | 1 366.3 | 2005 |
| 299.0 | 89.0 | 29.6 | 41.0 | 1 479.1 | 2006* |
| | | | | | Share |
| 20% | 6% | 2% | 3% | 100% | 2006* |
| | | | | | Annual change |
| 9% | 29% | 9% | -33% | 8% | 06*/05 |

Renewable energy, PJ

| | Hydro power | Wood fuels in industry and energy production | Black liquor and others | Small scale combustion of wood | Recovered fuels (bio fraction) | Heat pumps | Others | Total | Share of total energy consumption |
|-------|-------------|--|-------------------------|--------------------------------|--------------------------------|------------|--------|--------------|-----------------------------------|
| 1970 | 33.9 | 20.2 | 57.7 | 92.2 | .. | .. | .. | 204.0 | 28% |
| 1975 | 43.5 | 14.8 | 48.3 | 67.6 | .. | .. | .. | 174.3 | 23% |
| 1980 | 36.4 | 31.1 | 67.4 | 43.6 | .. | 0.7 | .. | 179.2 | 19% |
| 1981 | 48.7 | 33.1 | 68.2 | 43.7 | .. | 1.1 | .. | 194.8 | 21% |
| 1982 | 46.6 | 29.4 | 60.5 | 43.8 | .. | 1.4 | .. | 181.8 | 20% |
| 1983 | 48.4 | 30.7 | 66.6 | 44.0 | .. | 1.7 | .. | 191.5 | 20% |
| 1984 | 47.2 | 34.4 | 74.7 | 44.0 | .. | 2.0 | .. | 202.4 | 21% |
| 1985 | 44.0 | 31.6 | 75.5 | 44.1 | .. | 2.6 | .. | 197.8 | 19% |
| 1986 | 44.2 | 31.1 | 77.2 | 44.2 | .. | 2.3 | .. | 199.0 | 19% |
| 1987 | 49.2 | 32.4 | 81.6 | 44.4 | .. | 2.6 | .. | 210.1 | 19% |
| 1988 | 47.6 | 35.0 | 88.1 | 44.5 | .. | 2.3 | 0.0 | 217.6 | 20% |
| 1989 | 46.4 | 36.3 | 91.1 | 44.6 | .. | 2.0 | 0.0 | 220.5 | 20% |
| 1990 | 38.7 | 36.5 | 86.1 | 44.7 | 0.3 | 2.2 | 0.0 | 208.4 | 18% |
| 1991 | 47.0 | 32.9 | 80.9 | 44.8 | 0.3 | 2.4 | 0.0 | 208.4 | 19% |
| 1992 | 53.8 | 32.8 | 83.5 | 44.9 | 0.4 | 2.4 | 0.0 | 217.8 | 20% |
| 1993 | 48.0 | 40.4 | 95.1 | 45.0 | 0.3 | 2.5 | 0.0 | 231.4 | 20% |
| 1994 | 42.0 | 52.4 | 104.4 | 45.0 | 0.3 | 2.6 | 0.0 | 246.7 | 20% |
| 1995 | 46.0 | 53.9 | 109.0 | 44.7 | 0.3 | 2.5 | 0.7 | 257.1 | 21% |
| 1996 | 42.1 | 56.2 | 109.6 | 46.9 | 0.3 | 2.7 | 0.7 | 258.7 | 21% |
| 1997 | 42.5 | 61.6 | 128.5 | 47.0 | 0.5 | 2.8 | 0.9 | 283.7 | 22% |
| 1998 | 53.2 | 64.7 | 135.4 | 47.6 | 1.1 | 3.0 | 0.9 | 305.9 | 23% |
| 1999 | 45.2 | 84.0 | 142.6 | 46.6 | 1.4 | 3.1 | 1.1 | 323.9 | 24% |
| 2000 | 52.0 | 84.9 | 138.4 | 45.3 | 1.9 | 2.9 | 1.4 | 326.8 | 25% |
| 2001 | 46.9 | 83.9 | 127.2 | 47.8 | 2.5 | 3.7 | 1.2 | 313.2 | 23% |
| 2002 | 38.2 | 89.6 | 140.5 | 48.7 | 2.4 | 4.1 | 1.4 | 325.0 | 23% |
| 2003 | 34.0 | 93.7 | 141.7 | 48.7 | 3.2 | 4.6 | 1.9 | 327.8 | 22% |
| 2004 | 53.5 | 100.5 | 148.2 | 48.5 | 4.0 | 5.6 | 2.5 | 362.8 | 25% |
| 2005 | 48.9 | 95.5 | 132.1 | 48.2 | 4.5 | 6.6 | 3.2 | 338.5 | 25% |
| 2006* | 40.8 | 100.0 | 150.0 | 49.0 | 4.5 | 8.7 | 3.1 | 356.2 | 24% |

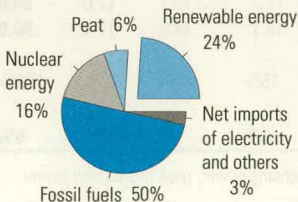
Renewable energy 2006



The total consumption of renewable energy in 2006* was 356 PJ which is 24% of total energy consumption.

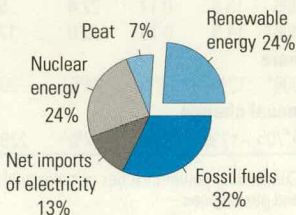
Renewable energy 2006

In total energy consumption



Total* 1 479 PJ

In electricity supply



Total* 90 TWh

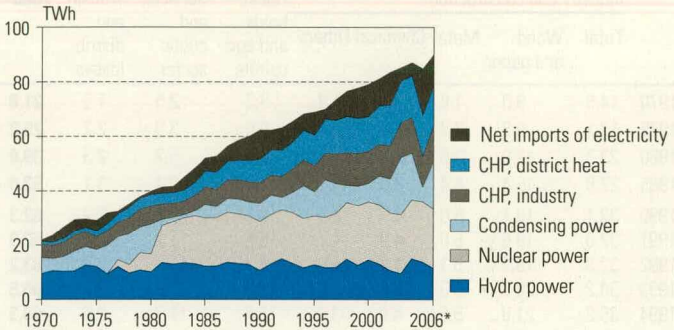
Supply and total consumption of electricity, TWh

| | Hydro power | Wind power | Nuclear power | Condensing power ¹⁾ | CHP industry | CHP district heat | Net imports | Total consumption |
|----------------------|-------------|------------|---------------|--------------------------------|--------------|-------------------|-------------|-------------------|
| 1970 | 9.4 | — | — | 5.9 | 4.9 | 1.0 | 0.5 | 21.8 |
| 1975 | 12.1 | — | — | 6.3 | 4.8 | 2.1 | 4.0 | 29.2 |
| 1980 | 10.1 | — | 6.6 | 11.1 | 6.6 | 4.2 | 1.2 | 39.9 |
| 1985 | 12.2 | — | 18.0 | 4.9 | 6.4 | 5.9 | 4.7 | 52.0 |
| 1990 | 10.8 | 0.00 | 18.1 | 6.6 | 7.7 | 8.5 | 10.7 | 62.3 |
| 1991 | 13.1 | 0.00 | 18.4 | 7.0 | 7.3 | 9.3 | 7.2 | 62.3 |
| 1992 | 15.0 | 0.00 | 18.2 | 4.6 | 7.7 | 9.5 | 8.2 | 63.2 |
| 1993 | 13.3 | 0.00 | 18.8 | 7.4 | 8.7 | 9.8 | 7.5 | 65.5 |
| 1994 | 11.7 | 0.01 | 18.3 | 12.0 | 9.5 | 10.7 | 6.1 | 68.3 |
| 1995 | 12.8 | 0.01 | 18.1 | 8.9 | 9.5 | 11.3 | 8.4 | 68.9 |
| 1996 | 11.7 | 0.01 | 18.7 | 13.8 | 9.7 | 12.5 | 3.7 | 70.0 |
| 1997 | 11.8 | 0.02 | 20.1 | 10.9 | 10.9 | 12.3 | 7.7 | 73.6 |
| 1998 | 14.8 | 0.02 | 21.0 | 6.3 | 12.0 | 13.2 | 9.3 | 76.6 |
| 1999 | 12.5 | 0.05 | 22.1 | 7.2 | 12.0 | 12.8 | 11.1 | 77.8 |
| 2000 | 14.5 | 0.08 | 21.6 | 6.7 | 11.7 | 12.7 | 11.9 | 79.2 |
| 2001 | 13.0 | 0.07 | 21.9 | 10.6 | 11.6 | 14.1 | 10.0 | 81.2 |
| 2002 | 10.6 | 0.06 | 21.4 | 12.4 | 12.3 | 14.9 | 11.9 | 83.5 |
| 2003 | 9.5 | 0.09 | 21.8 | 21.0 | 12.7 | 15.3 | 4.9 | 85.2 |
| 2004 | 14.9 | 0.12 | 21.8 | 17.2 | 13.0 | 15.1 | 4.9 | 87.0 |
| 2005 | 13.6 | 0.17 | 22.4 | 5.3 | 11.3 | 15.1 | 17.0 | 84.8 |
| 2006* | 11.3 | 0.15 | 22.0 | 17.6 | 13.1 | 14.5 | 11.4 | 90.0 |
| Share | | | | | | | | |
| 2006* | 13% | 0% | 24% | 20% | 15% | 16% | 13% | 100% |
| Annual change | | | | | | | | |
| 06*/05 | -17% | -9% | -2% | 229% | 16% | -4% | -33% | 6% |

¹⁾ Condensing power includes conventional condensing power, peak gas turbine power and gas engines.

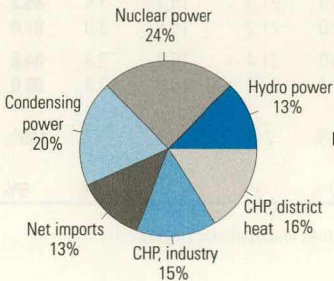
Sources: Adato Energia Oy, Finnish Wind Power Association and Statistics Finland/
Environment and energy

Electricity supply 1970–2006

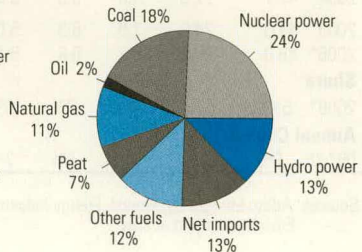


Electricity supply 2006

By mode of production



By source



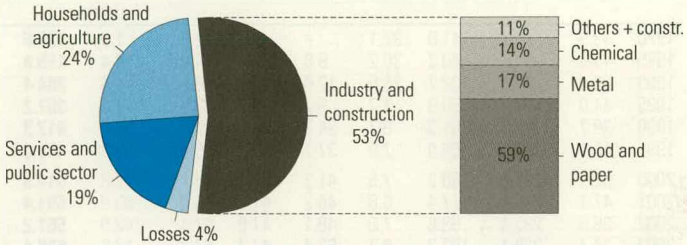
Total electricity supply in 2006* was 90.0 TWh.

Electricity consumption by sector, TWh

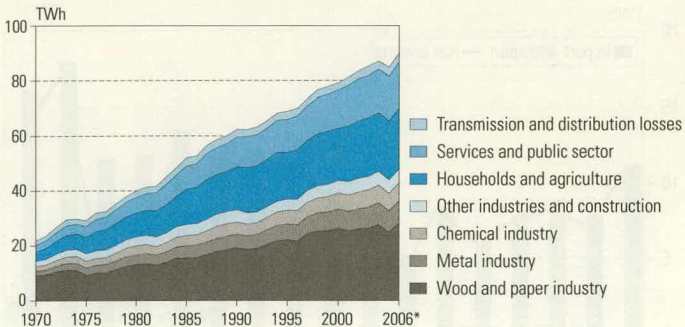
| | Industry and construction | | | | | Households and agriculture | Services and public sector | Transm. and distrib. losses | Total |
|----------------------|---------------------------|----------------|-------|----------|--------|----------------------------|----------------------------|-----------------------------|-------|
| | Total | Wood and paper | Metal | Chemical | Others | | | | |
| 1970 | 14.5 | 9.0 | 1.8 | 1.8 | 1.9 | 3.3 | 2.5 | 1.5 | 21.8 |
| 1975 | 17.1 | 9.2 | 2.7 | 2.4 | 2.7 | 6.0 | 3.9 | 2.2 | 29.2 |
| 1980 | 23.3 | 13.0 | 3.6 | 3.4 | 3.3 | 8.6 | 5.7 | 2.3 | 39.9 |
| 1985 | 27.8 | 15.4 | 4.4 | 3.8 | 4.1 | 12.8 | 8.4 | 3.1 | 52.0 |
| 1990 | 33.1 | 19.1 | 5.0 | 4.5 | 4.5 | 15.6 | 10.8 | 2.8 | 62.3 |
| 1991 | 32.0 | 18.6 | 5.0 | 4.2 | 4.1 | 16.5 | 11.2 | 2.6 | 62.3 |
| 1992 | 32.3 | 18.9 | 5.1 | 4.4 | 4.0 | 16.7 | 11.4 | 2.8 | 63.2 |
| 1993 | 34.2 | 20.5 | 5.3 | 4.6 | 3.8 | 17.2 | 11.5 | 2.7 | 65.5 |
| 1994 | 36.2 | 21.8 | 5.5 | 4.9 | 3.9 | 17.8 | 11.7 | 2.6 | 68.3 |
| 1995 | 37.0 | 22.2 | 5.7 | 5.0 | 4.1 | 17.1 | 11.9 | 3.0 | 68.9 |
| 1996 | 36.9 | 21.7 | 6.0 | 5.1 | 4.2 | 18.0 | 12.4 | 2.7 | 70.0 |
| 1997 | 40.2 | 24.4 | 6.2 | 5.2 | 4.4 | 18.2 | 12.6 | 2.5 | 73.6 |
| 1998 | 41.8 | 25.3 | 6.7 | 5.4 | 4.4 | 19.0 | 13.1 | 2.8 | 76.6 |
| 1999 | 42.3 | 25.4 | 6.8 | 5.6 | 4.5 | 19.3 | 13.4 | 2.8 | 77.8 |
| 2000 | 43.8 | 26.3 | 7.0 | 5.9 | 4.6 | 19.0 | 13.8 | 2.6 | 79.2 |
| 2001 | 43.3 | 25.4 | 7.0 | 5.9 | 4.9 | 20.2 | 14.7 | 2.9 | 81.2 |
| 2002 | 44.6 | 26.1 | 7.2 | 6.2 | 5.1 | 20.8 | 15.2 | 2.9 | 83.5 |
| 2003 | 45.2 | 26.4 | 7.7 | 6.3 | 4.9 | 21.3 | 15.3 | 3.4 | 85.2 |
| 2004 | 47.1 | 27.5 | 8.0 | 6.5 | 5.0 | 21.2 | 15.8 | 3.0 | 87.0 |
| 2005 | 44.0 | 24.9 | 7.8 | 6.3 | 5.0 | 21.4 | 16.2 | 3.3 | 84.8 |
| 2006* | 48.0 | 28.1 | 8.1 | 6.6 | 5.1 | 22.0 | 16.8 | 3.3 | 90.0 |
| Share | | | | | | | | | |
| 2006* | 53% | 31% | 9% | 7% | 6% | 24% | 19% | 4% | 100% |
| Annual Change | | | | | | | | | |
| 06*/05 | 9% | 13% | 5% | 5% | 2% | 3% | 4% | 0% | 6% |

Sources: Adato Energia Oy, Finnish Energy Industries and Statistics Finland/
Environment and energy

Electricity consumption by sector 2006



Electricity consumption by sector 1970–2006

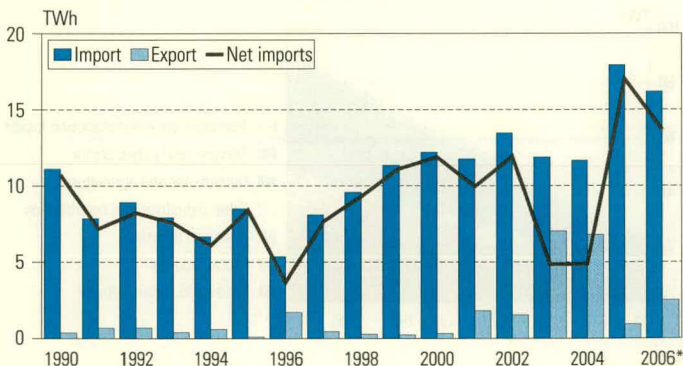


Energy sources in electricity generation, PJ

| | Hydro power | Nuclear energy | Hard coal | Oil | Natural gas | Peat | Other fuels | Net imports of electr. | Total |
|-------|-------------|----------------|-----------|------|-------------|------|-------------|------------------------|--------------|
| 1970 | 33.9 | — | 41.8 | 32.1 | — | .. | 17.9 | 1.9 | 127.6 |
| 1975 | 43.5 | — | 40.2 | 38.2 | 8.9 | .. | 14.6 | 14.4 | 159.8 |
| 1980 | 36.4 | 72.3 | 102.7 | 26.8 | 12.6 | .. | 29.2 | 4.4 | 284.4 |
| 1985 | 44.0 | 196.1 | 60.9 | 7.7 | 9.7 | 8.9 | 22.7 | 17.0 | 367.2 |
| 1990 | 38.7 | 197.8 | 61.3 | 9.7 | 24.8 | 17.2 | 29.1 | 38.7 | 417.3 |
| 1995 | 46.1 | 197.8 | 65.0 | 7.5 | 37.1 | 36.3 | 36.6 | 30.3 | 456.6 |
| 2000 | 52.3 | 235.4 | 60.2 | 7.5 | 41.3 | 21.7 | 53.7 | 42.8 | 514.9 |
| 2001 | 47.1 | 238.4 | 77.4 | 6.6 | 48.2 | 41.1 | 56.6 | 35.9 | 551.4 |
| 2002 | 38.5 | 233.4 | 93.6 | 7.0 | 48.1 | 41.6 | 62.1 | 42.9 | 567.2 |
| 2003 | 34.4 | 238.1 | 152.2 | 8.7 | 62.4 | 47.7 | 67.3 | 17.5 | 628.4 |
| 2004 | 53.9 | 238.0 | 136.3 | 10.8 | 51.2 | 46.3 | 62.4 | 17.5 | 616.3 |
| 2005 | 49.6 | 243.6 | 44.4 | 8.4 | 41.7 | 29.4 | 56.4 | 61.2 | 534.7 |
| 2006* | 41.4 | 239.8 | 134.0 | 10.7 | 53.4 | 46.0 | 63.9 | 41.0 | 630.2 |

Source: Adato Energia Oy

Imports and exports of electricity 1990–2006



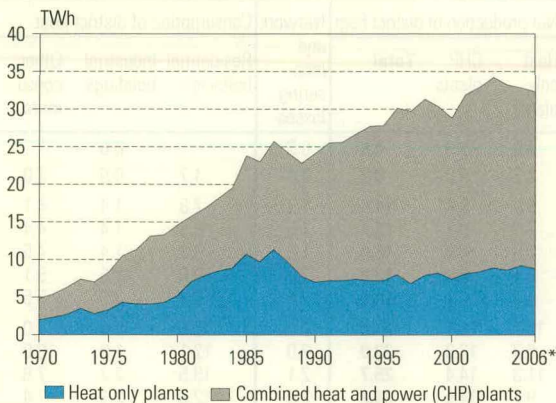
Source: Adato Energia Oy

Production and consumption of district heat, TWh

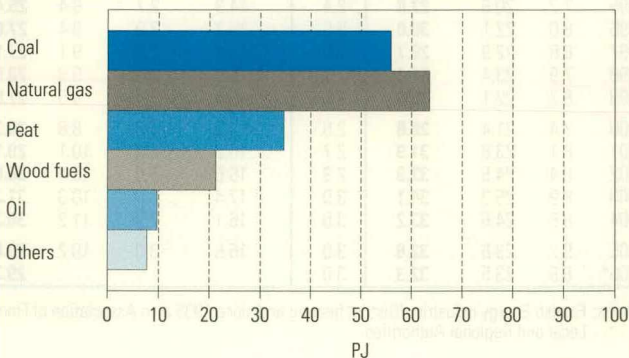
| Net production of district heat | | | | Network and measuring losses | Consumption of district heat | | | |
|---------------------------------|------------|-------|-----------------------|------------------------------|------------------------------|-----------------|-------|------|
| Heat only plants | CHP plants | Total | Residential buildings | | Industrial buildings | Other consumers | Total | |
| 1970 | 2.0 | 2.8 | 4.8 | 0.3 | .. | 0.6 | .. | 4.5 |
| 1975 | 3.3 | 5.0 | 8.2 | 0.6 | 4.7 | 0.9 | 2.0 | 7.7 |
| 1980 | 5.2 | 9.4 | 14.6 | 1.3 | 7.8 | 1.4 | 4.1 | 13.3 |
| 1981 | 7.1 | 8.7 | 15.7 | 1.5 | 8.5 | 1.4 | 4.4 | 14.3 |
| 1982 | 7.9 | 9.0 | 16.9 | 1.8 | 9.2 | 1.4 | 4.5 | 15.1 |
| 1983 | 8.5 | 9.7 | 18.2 | 2.0 | 9.6 | 1.5 | 5.1 | 16.2 |
| 1984 | 8.9 | 10.7 | 19.6 | 2.1 | 10.3 | 1.6 | 5.5 | 17.5 |
| 1985 | 10.7 | 13.1 | 23.8 | 2.2 | 12.6 | 2.1 | 7.0 | 21.7 |
| 1986 | 9.7 | 13.3 | 23.0 | 2.0 | 12.1 | 1.9 | 6.9 | 21.0 |
| 1987 | 11.3 | 14.4 | 25.7 | 2.1 | 13.5 | 2.2 | 7.8 | 23.6 |
| 1988 | 9.7 | 14.5 | 24.2 | 2.0 | 12.8 | 2.1 | 7.4 | 22.2 |
| 1989 | 7.8 | 15.0 | 22.8 | 2.0 | 11.9 | 1.9 | 7.0 | 20.9 |
| 1990 | 7.0 | 17.1 | 24.1 | 1.9 | 12.5 | 2.0 | 7.7 | 22.3 |
| 1991 | 7.2 | 18.3 | 25.5 | 2.0 | 13.0 | 2.1 | 8.4 | 23.5 |
| 1992 | 7.2 | 18.4 | 25.6 | 2.0 | 13.1 | 2.1 | 8.4 | 23.6 |
| 1993 | 7.4 | 19.3 | 26.7 | 2.0 | 13.9 | 2.3 | 8.5 | 24.6 |
| 1994 | 7.2 | 20.5 | 27.6 | 2.3 | 14.0 | 2.4 | 8.9 | 25.3 |
| 1995 | 7.2 | 20.6 | 27.8 | 2.4 | 14.3 | 2.7 | 8.4 | 25.4 |
| 1996 | 8.0 | 22.1 | 30.0 | 2.5 | 15.3 | 2.9 | 9.4 | 27.6 |
| 1997 | 6.8 | 22.9 | 29.7 | 2.6 | 15.1 | 2.9 | 9.1 | 27.1 |
| 1998 | 7.9 | 23.4 | 31.3 | 2.7 | 15.6 | 3.0 | 9.9 | 28.5 |
| 1999 | 8.2 | 22.1 | 30.4 | 2.6 | 15.4 | 3.0 | 9.5 | 27.8 |
| 2000 | 7.4 | 21.4 | 28.8 | 2.5 | 14.9 | 2.6 | 8.8 | 26.3 |
| 2001 | 8.1 | 23.8 | 31.9 | 2.7 | 16.2 | 2.9 | 10.1 | 29.1 |
| 2002 | 8.4 | 24.5 | 32.9 | 2.9 | 16.6 | 3.0 | 10.4 | 30.0 |
| 2003 | 8.9 | 25.3 | 34.1 | 3.0 | 17.4 | 3.0 | 10.9 | 31.2 |
| 2004 | 8.6 | 24.6 | 33.2 | 3.0 | 16.1 | 2.9 | 11.2 | 30.3 |
| 2005 | 9.2 | 23.6 | 32.8 | 3.0 | 16.6 | 3.0 | 10.2 | 29.8 |
| 2006* | 8.8 | 23.5 | 32.3 | 3.0 | .. | .. | .. | 29.3 |

Sources: Finnish Energy Industries/District heating and since 1995 also Association of Finnish Local and Regional Authorities

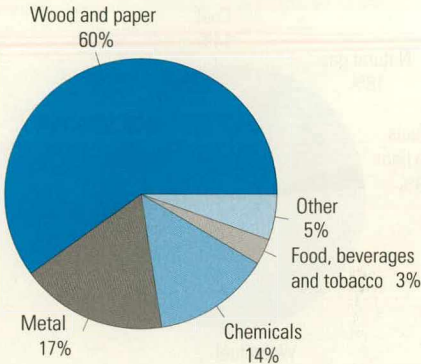
Production of district heat 1970–2006



Fuel consumption in production of district heat and combined production of district heat and electricity 2006

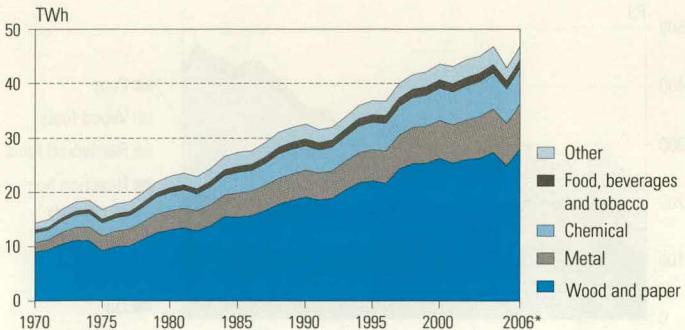


Electricity consumption by branch of industry 2006

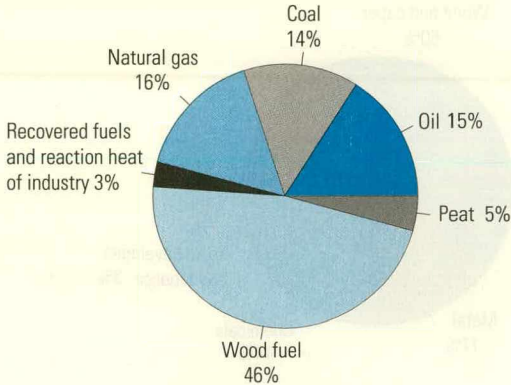


Total electricity consumption by industry in 2006* was 46.8 TWh.

Electricity consumption by branch of industry 1970–2006

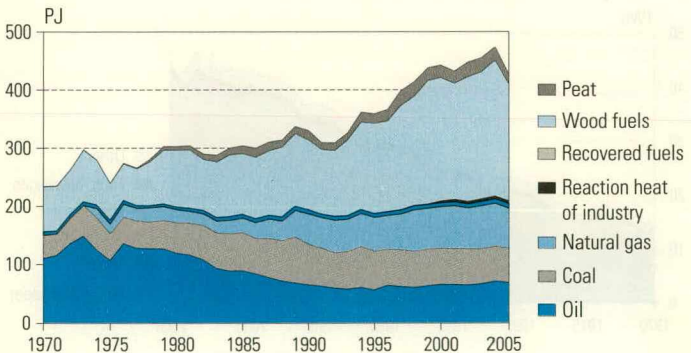


Fuel consumption in industry 2005



Total fuel consumption in industry in 2005 was 432 PJ.

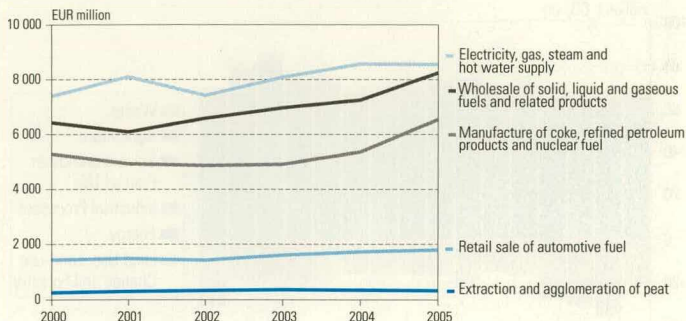
Fuel consumption in industry 1970–2005



Enterprises in energy sector in 2005

| | Number of enterprises | Turnover, EUR mil. | Employees | Staff expenses, EUR mil. |
|---|-----------------------|--------------------|-----------|--------------------------|
| Wholesale of solid, liquid and gaseous fuels and related products | 979 | 1 780 | 7 291 | 172 |
| Electricity, gas, steam and hot water supply | 626 | 8 540 | 12 787 | 622 |
| Extraction and agglomeration of peat | 609 | 323 | 1 342 | 45 |
| Retail sale of automotive fuel | 149 | 8 246 | 1 870 | 101 |
| Manufacture of coke, refined petroleum products and nuclear fuel | 9 | 6 548 | 2 761 | 163 |

Turnover of enterprises in energy sector 2000–2005



Source: Statistics Finland, Financial statements of enterprises.

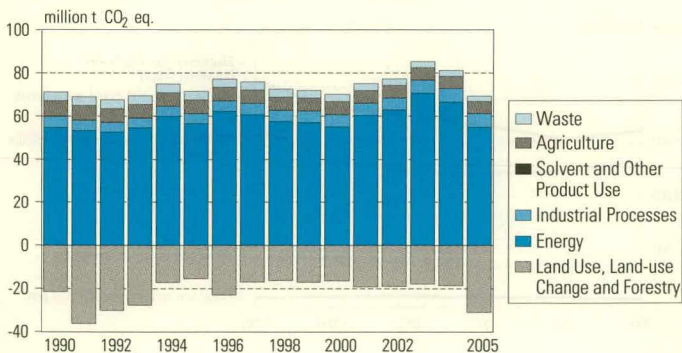
Greenhouse gas emissions 1990 and 2005 (1 000 tonnes)

The gases included in the Kyoto Protocol

| | Carbon dioxide (CO ₂) | | Methane (CH ₄) | | Nitrous oxide (N ₂ O) | | F-gases (HFC, PFC, SF ₆) CO ₂ eq. | |
|--|--------------------------------------|---------------|-------------------------------|------------|-------------------------------------|-----------|---|------------|
| | 1990 | 2005 | 1990 | 2005 | 1990 | 2005 | 1990 | 2005 |
| Fuel combustion | 53 249 | 53 139 | 15 | 13 | 3 | 4 | — | — |
| Fugitive emissions from fuels | 226 | 130 | 1 | 3 | — | — | — | — |
| Industrial processes | 3 312 | 3 683 | — | 1 | 5 | 5 | 90 | 873 |
| Solvent and other pro- duct use | 116 | 60 | — | — | — | — | — | — |
| Agriculture* | 0 | 0 | 102 | 88 | 16 | 12 | — | — |
| Waste | 0 | 0 | 182 | 108 | 1 | 1 | — | — |
| Total | 56 903 | 57 012 | 300 | 213 | 25 | 22 | 90 | 873 |
| Emissions, million ton- nes of CO ₂ equivalent | 56.9 | 57.0 | 6.3 | 4.5 | 6.2 | 5.3 | 0.1 | 0.9 |

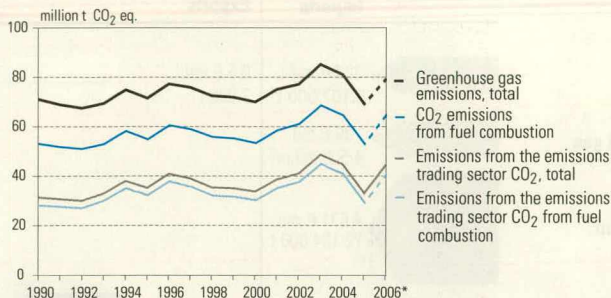
* CO₂ emissions from agricultural soils are reported in land use, land use change and forestry.

Greenhouse gas emissions 1990–2005

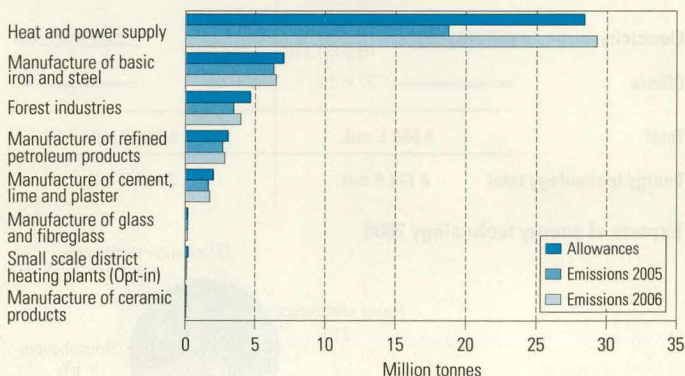


Source: Statistics Finland, Greenhouse Gas Inventory

Finland's greenhouse gas emissions 1990–2006



National allowances under EU ETS and verified CO₂ emissions for 2005 and 2006 by branch in Finland



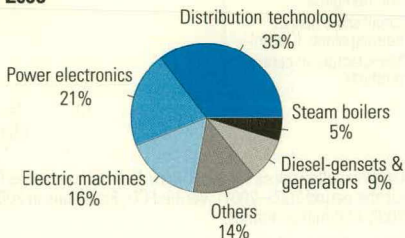
Emission allowances for 2006 were 45.5 million tonnes (estimated from the total allowances for the period 2005–2007). Verified CO₂ Emissions in 2005 were 33.1 million tonnes and in 2006 44.6 million tonnes.

Source: Energy Market Authority

Imports and exports of energy and energy technology 2006*

| | Imports | Exports |
|---------------------------------|--|-----------------------------|
| Coal | 377 € mil. 6 107 000 t | 0.5 € mil. 2 000 t |
| Natural gas | 739 € mil. 4 500 mil.m ³ | |
| Crude oil | 4 671 € mil. 12 184 000 t | |
| Other petroleum products | 2 020 € mil. 4 598 000 t | 3 104 € mil. 5 705 000 t |
| Nuclear fuel | 63 € mil. 68 tU | |
| Electricity | 700 € mil. 18 208 GWh | 139 € mil. 2 512 Gwh |
| Others | 97 € mil. | 10 € mil. |
| Total | 8 666 € mil. | 3 254 € mil. |
| Energy technology total | 2 724 € mil. | 3 863 € mil. |

Exports of energy technology 2006



Energy imports 2006

| | | | | | | | | Total | |
|----------------------------|---------------------|--------|--------|--------------|------------------|--------|--------------------|---------------|-----------------|
| | | Russia | Norway | Den- mark | Great Britain | Sweden | Other countries | Amount | Value mil. € |
| Hard coal | 1 000 t | 3 545 | 47 | — | 9 | 1 | 1 997 | 5 598 | 296 |
| Coke | 1 000 t | .. | .. | .. | .. | .. | .. | 508 | 81 |
| Natural gas | mil. m ³ | 4 500 | — | — | — | — | — | 4 500 | 739 |
| Crude oil | 1 000 t | 7 777 | 1 299 | 1 357 | 1 150 | — | 601 | 12 184 | 4 671 |
| Motor gasoline | 1 000 t | — | 7 | — | 0 | 11 | 38 | 55 | 30 |
| Middle distillates | 1 000 t | 1 774 | 177 | — | 0 | 81 | 442 | 2 474 | 1 118 |
| Heavy fuel oil | 1 000 t | 13 | — | 134 | 0 | 431 | 105 | 683 | 184 |
| LPG | 1 000 t | 13 | 89 | 0 | 0 | 10 | 50 | 162 | 73 |
| Other petro- leum prod. | 1 000 t | 500 | 62 | 2 | 50 | 125 | 336 | 1 075 | 538 |
| Methanol | 1 000 t | 478 | — | — | 0 | 0 | 0 | 478 | 97 |
| MTBE | 1 000 t | 93 | — | 0 | 0 | 0 | 55 | 148 | 77 |
| Peat | 1 000 t | .. | .. | .. | .. | .. | .. | .. | .. |
| Nuclear fuel | tU | 12 | — | — | — | 21 | 34 | 68 | 63 |
| Electricity | GWh | 11 536 | 4 153 | — | — | 2 519 | — | 18 208 | 700 |
| Value | mil. € | 5 339 | 913 | 534 | 524 | 382 | 975 | | 8 666 |

Import of wood fuels is excluded.

Source: Board of Customs /Foreign Trade Statistics

In addition, energy technology imports totalled 2 724 million euros in 2006*.

Source: Etlatieto Oy

Energy exports 2006

| | | | | | | | | Total | |
|-----------------------|---------|--------|---------------|---------|---------------|---------|-----------------|--------------|--------------|
| | | | | | | | | Amount | Value |
| | | | | | | | | mil. € | |
| | | Sweden | United States | Germany | Great Britain | Belgien | Other countries | | |
| Coke | 1 000 t | — | — | — | — | — | 2 | 2 | 0 |
| Motor gasoline | 1 000 t | 642 | 884 | 399 | 95 | — | 395 | 2 415 | 1 267 |
| Jet fuel | 1 000 t | 43 | — | — | — | — | 0 | 43 | 23 |
| Middle distillates | 1 000 t | 918 | — | 393 | 489 | — | 422 | 2 222 | 1 142 |
| Heavy fuel oil | 1 000 t | 20 | — | 7 | — | — | 50 | 77 | 19 |
| LPG | 1 000 t | 0 | — | — | — | — | 1 | 1 | 1 |
| Other petroleum prod. | 1 000 t | 136 | 0 | 104 | 48 | 298 | 360 | 947 | 653 |
| Peat | 1 000 t | 37 | 0 | 22 | 4 | 2 | 50 | 116 | 10 |
| Electricity | GWh | 2 464 | — | — | — | — | 48 | 2 512 | 139 |
| Value | mil. € | 1 052 | 473 | 455 | 318 | 195 | 762 | 3 254 | |

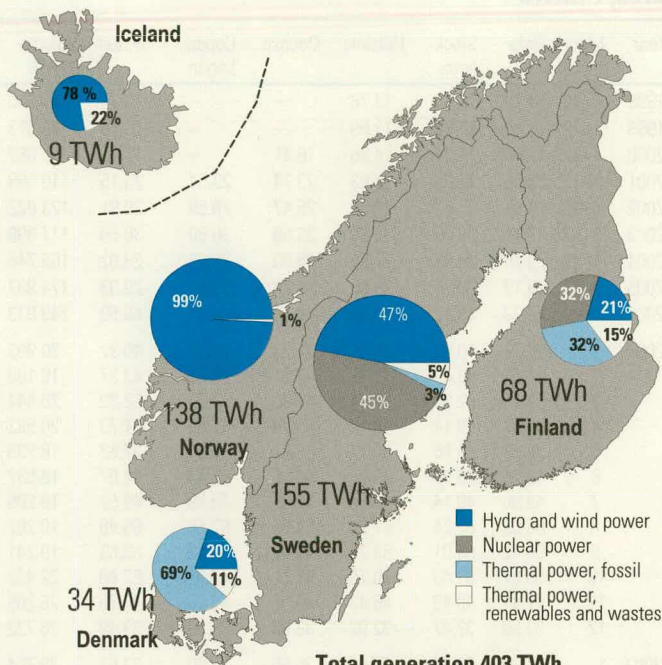
Export of wood fuels is excluded.

Source: Board of Customs /Foreign Trade Statistics

In addition, energy technology exports totalled 3 863 million euros in 2006*.

Source: Etlatieto Oy

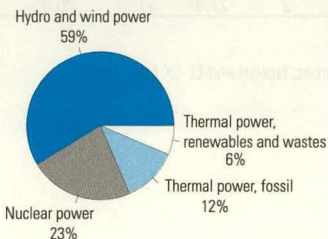
Electricity generation in nordic countries 2005



Electricity consumption in nordic countries 2005, TWh

| | |
|--------------|------------|
| Sweden | 147 |
| Norway | 126 |
| Finland | 85 |
| Denmark | 36 |
| Iceland | 9 |
| Total | 403 |

Source: Nordel Annual Report 2005



Spot prices of the Nordic Power Exchange NordPool by price area, €/MWh

| Year | Month | Oslo | Stock-holm | Helsinki | Odense | Copen-hagen | System | Volume (GWh) |
|------|-------|-------|------------|----------|--------|-------------|--------|--------------|
| 1998 | 1-12 | 13.73 | 13.54 | 13.78 | — | — | 13.78 | 57 240 |
| 1999 | 1-12 | 13.10 | 13.58 | 13.65 | — | — | 13.46 | 75 373 |
| 2000 | 1-12 | 12.06 | 14.24 | 14.88 | 16.41 | — | 12.75 | 95 687 |
| 2001 | 1-12 | 23.08 | 22.86 | 22.83 | 23.74 | 23.54 | 23.15 | 110 589 |
| 2002 | 1-12 | 26.57 | 27.62 | 27.28 | 25.47 | 28.59 | 26.91 | 123 622 |
| 2003 | 1-12 | 37.11 | 36.49 | 35.30 | 33.68 | 36.80 | 36.69 | 117 899 |
| 2004 | 1-12 | 29.40 | 28.08 | 27.68 | 28.80 | 28.35 | 28.92 | 165 748 |
| 2005 | 1-12 | 29.13 | 29.76 | 30.53 | 37.23 | 33.80 | 29.33 | 174 937 |
| 2006 | 1-12 | 49.23 | 48.12 | 48.57 | 44.18 | 48.53 | 48.59 | 249 833 |
| 2006 | 1 | 38.88 | 40.04 | 43.09 | 41.73 | 49.42 | 40.32 | 20 993 |
| | 2 | 42.67 | 43.49 | 47.75 | 47.01 | 50.53 | 43.37 | 19 108 |
| | 3 | 52.23 | 52.34 | 53.24 | 47.66 | 59.52 | 52.39 | 20 444 |
| | 4 | 53.63 | 49.14 | 49.14 | 45.24 | 48.89 | 51.73 | 20 582 |
| | 5 | 39.93 | 35.26 | 35.17 | 36.22 | 35.33 | 37.62 | 18 935 |
| | 6 | 43.74 | 45.35 | 45.33 | 44.18 | 45.44 | 44.07 | 18 537 |
| | 7 | 49.96 | 49.14 | 49.14 | 48.36 | 48.89 | 49.52 | 18 286 |
| | 8 | 66.69 | 67.24 | 67.24 | 51.86 | 62.60 | 66.48 | 19 282 |
| | 9 | 65.12 | 65.01 | 63.72 | 48.42 | 54.56 | 63.63 | 19 241 |
| | 10 | 56.67 | 51.43 | 50.78 | 45.11 | 47.97 | 53.68 | 22 487 |
| | 11 | 47.41 | 46.49 | 46.43 | 40.92 | 43.99 | 46.75 | 25 205 |
| | 12 | 33.56 | 32.47 | 32.02 | 33.83 | 35.59 | 33.49 | 26 732 |
| 2007 | 1 | 27.70 | 27.47 | 27.46 | 25.66 | 27.30 | 27.57 | 28 784 |
| | 2 | 27.67 | 30.13 | 30.08 | 28.47 | 30.59 | 28.82 | 27 458 |

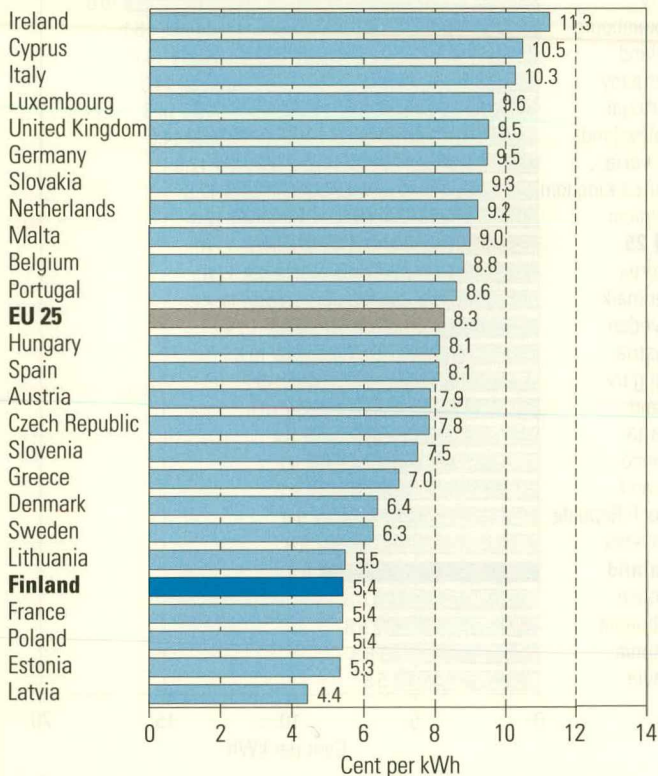
Sources: Nordel and EL-EX NordPool

Electricity prices for households on 1st of January 2007



Households annual consumption of 3 500 kWh of which 1 300 kWh is overnight (standard dwelling of 90m²). Prices are given without taxes.

Electricity prices for industry on 1st of January 2007



Electricity prices to industrial consumers with annual consumption of 2 000 MWh, maximum demand of 500 kW and annual load of 4 000 hours. Prices are without taxes.

Total energy consumption of in EU and some of the OECD countries, PJ

| | 1985 | 1990 | 1995 | 2000 | 2002 | 2003 | 2004 |
|-------------------|--------|----------------|---------------|----------------|----------------|----------------|----------------|
| Germany | 15 040 | 14 840 | 14 150 | 14 240 | 14 440 | 14 520 | 14 560 |
| France | 8 540 | 9 490 | 10 040 | 10 820 | 11 140 | 11 320 | 11 460 |
| United Kingdom | 8 530 | 8 840 | 9 130 | 9 640 | 9 480 | 9 650 | 9 720 |
| Italy | 5 590 | 6 410 | 6 750 | 7 220 | 7 260 | 7 660 | 7 740 |
| Spain | 3 170 | 3 740 | 4 280 | 5 140 | 5 440 | 5 620 | 5 870 |
| Poland | .. | 4 190 | 4 190 | 3 800 | 3 740 | 3 840 | 3 870 |
| Netherlands | 2 550 | 2 810 | 3 070 | 3 170 | 3 270 | 3 370 | 3 450 |
| Belgium | 1 840 | 1 980 | 2 110 | 2 390 | 2 200 | 2 340 | 2 300 |
| Sweden | 1 960 | 1 970 | 2 110 | 2 010 | 2 160 | 2 140 | 2 220 |
| Czech Republic | .. | 1 980 | 1 700 | 1 690 | 1 730 | 1 820 | 1 820 |
| Finland | 1 120 | 1 200 | 1 210 | 1 360 | 1 470 | 1 560 | 1 580 |
| Austria | 990 | 1 040 | 1 120 | 1 190 | 1 270 | 1 360 | 1 370 |
| Greece | 990 | 930 | 1 010 | 1 180 | 1 240 | 1 260 | 1 280 |
| Hungary | .. | 1 200 | 1 080 | 1 050 | 1 080 | 1 110 | 1 100 |
| Portugal | 520 | 710 | 820 | 1 010 | 1 090 | 1 060 | 1 100 |
| Denmark | 820 | 750 | 850 | 820 | 830 | 860 | 840 |
| Slovakia | .. | 880 | 740 | 730 | 790 | 780 | 760 |
| Ireland | 370 | 440 | 460 | 590 | 630 | 620 | 660 |
| Lithuania | .. | 670 | 360 | 300 | 360 | 380 | 380 |
| Slovenia | .. | 230 | 250 | 270 | 300 | 300 | 300 |
| Estonia | .. | 410 | 220 | 190 | 210 | 230 | 240 |
| Luxembourg | 130 | 150 | 140 | 150 | 170 | 180 | 200 |
| Latvia | .. | 330 | 200 | 160 | 180 | 180 | 190 |
| Cyprus | .. | .. | 80 | 100 | 100 | 110 | 100 |
| Malta | .. | 20 | 30 | 30 | 40 | 40 | 40 |
| EU 25 | .. | .. | 66 120 | 69 270 | 70 630 | 72 320 | 73 140 |
| Canada | .. | 8 770 | 9 680 | 10 470 | 10 470 | 10 990 | 11 260 |
| Japan | .. | 18 670 | 21 040 | 22 150 | 21 840 | 21 610 | 22 320 |
| United States | .. | 80 710 | 87 440 | 96 470 | 95 810 | 95 500 | 97 380 |
| OECD Total | .. | 189 490 | .. | 222 920 | 223 890 | 226 040 | 230 600 |

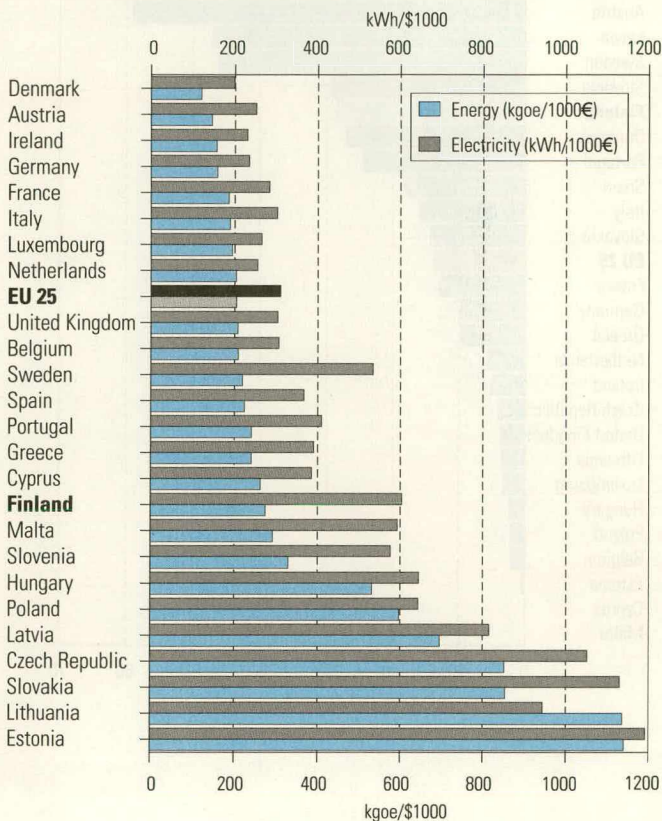
Source: Eurostat, IEA /Energy Balances of OECD Countries 2003–2004

Electricity consumption in EU and some of the OECD countries, TWh

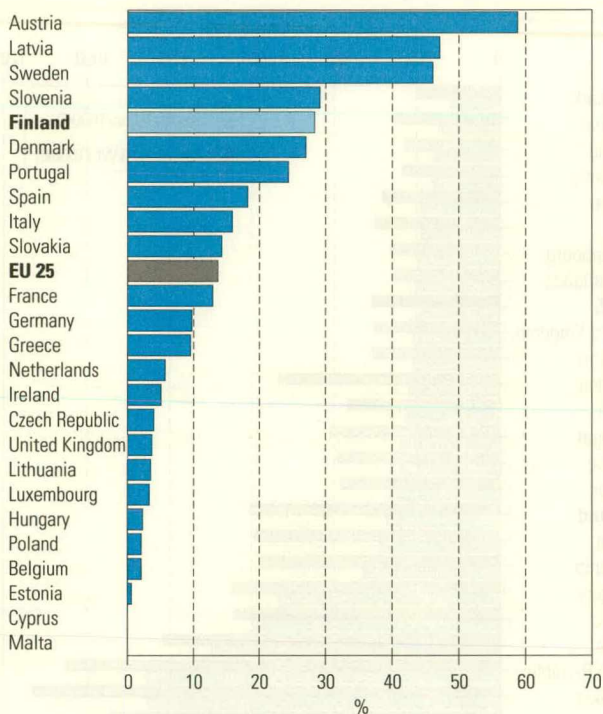
| | 1985 | 1990 | 1995 | 2000 | 2002 | 2003 | 2004 |
|-------------------|-----------|----------------|----------------|----------------|----------------|----------------|----------------|
| Germany | 424.6 | 446.5 | 452.6 | 482.6 | 498.8 | 509.3 | 513.3 |
| France | 252.9 | 301.9 | 342.6 | 385.1 | 393.2 | 408.2 | 415.9 |
| United Kingdom | 242.1 | 274.4 | 293.9 | 329.5 | 333.3 | 337.4 | 340.0 |
| Italy | 173.7 | 214.1 | 237.7 | 272.5 | 282.3 | 291.0 | 295.0 |
| Spain | 102.8 | 125.8 | 140.9 | 188.5 | 206.5 | 220.0 | 230.7 |
| Sweden | 113.6 | 120.3 | 124.6 | 128.7 | 131.3 | 129.4 | 130.4 |
| Netherlands | 61.5 | 73.5 | 83.1 | 97.9 | 99.7 | 100.5 | 103.1 |
| Poland | 92.1 | 95.8 | 89.6 | 96.7 | 95.5 | 98.2 | 99.8 |
| Finland | 48.5 | 58.9 | 65.3 | 75.4 | 79.7 | 80.9 | 83.1 |
| Belgium | 48.4 | 58.0 | 68.4 | 77.5 | 78.4 | 79.7 | 80.6 |
| Austria | 37.0 | 42.7 | 46.0 | 51.8 | 54.9 | 55.2 | 56.4 |
| Czech Republic | 43.3 | 48.2 | 48.0 | 49.4 | 50.8 | 52.4 | 53.8 |
| Greece | 23.8 | 28.5 | 34.1 | 43.2 | 46.6 | 48.6 | 49.7 |
| Portugal | 17.4 | 23.5 | 28.8 | 38.4 | 41.5 | 43.2 | 44.7 |
| Denmark | 25.4 | 29.3 | 31.2 | 32.5 | 32.5 | 32.4 | 33.0 |
| Hungary | 30.2 | 31.6 | 27.7 | 29.4 | 31.5 | 31.4 | 31.8 |
| Slovakia | 21.5 | 23.4 | 21.7 | 22.0 | 22.7 | 23.0 | 24.0 |
| Ireland | 9.8 | 11.9 | 14.8 | 20.2 | 21.8 | 22.5 | 23.0 |
| Slovenia | .. | 9.7 | 9.4 | 10.5 | 11.8 | 12.0 | 12.6 |
| Lithuania | .. | 12.0 | 6.3 | 6.2 | 6.7 | 7.1 | 7.6 |
| Luxembourg | 3.8 | 4.1 | 5.0 | 5.7 | 5.7 | 6.0 | 6.4 |
| Estonia | .. | 6.8 | 4.5 | 5.0 | 5.3 | 5.6 | 5.9 |
| Latvia | .. | 8.3 | 4.4 | 4.4 | 4.8 | 5.2 | 5.4 |
| Cyprus | .. | 1.8 | 2.2 | 3.0 | 3.4 | 3.6 | 3.7 |
| Malta | .. | 0.9 | 1.3 | 1.6 | 1.7 | 1.8 | 1.8 |
| EU 25 | .. | 2 051.9 | 2 184.3 | 2 457.8 | 2 540.5 | 2 604.6 | 2 651.7 |
| Canada | .. | 447.6 | 484.3 | 522.7 | 531.8 | 544.9 | 548.8 |
| Japan | .. | 803.9 | 925.9 | 1 015.8 | 1 014.5 | 1 001.3 | 1 031.3 |
| United States | .. | 2 923.9 | 3 371.0 | 3 857.3 | 3 785.1 | 3 854.8 | 3 920.6 |
| OECD Total | .. | 7 056.7 | 7 949.4 | 9 050.7 | 9 173.9 | 9 335.3 | 9 548.2 |

Source: Eurostat, IEA /Energy Statistics of OECD Countries 2003–2004

Consumption of energy and electricity per GDP-unit in EU countries 2004

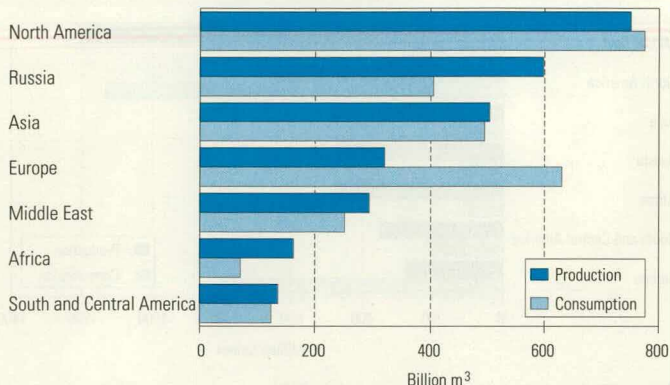


Renewable energy as a proportion of electricity consumption in 2004



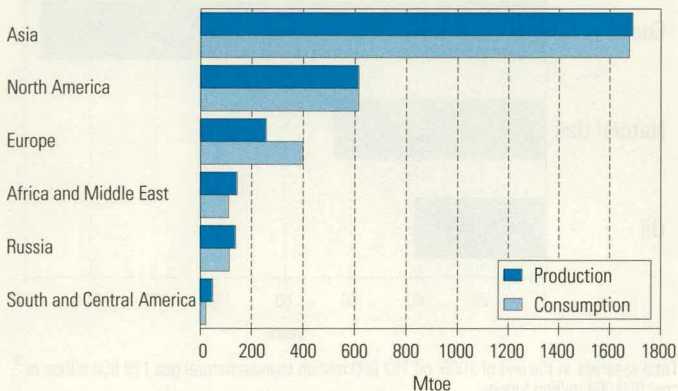
Source: European Commission/DG TREN

Gas production and consumption by region in 2005



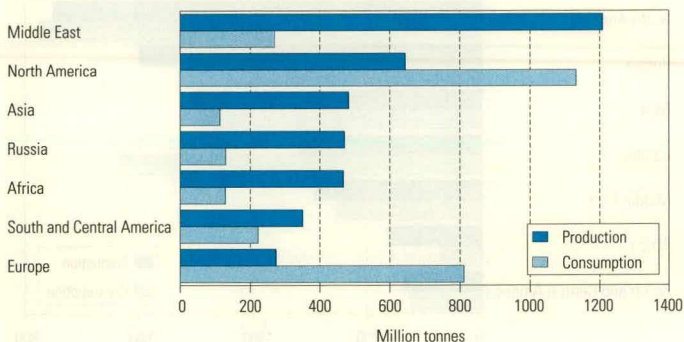
Source: BP statistical review of world energy June 2006

Coal production and consumption by region in 2005



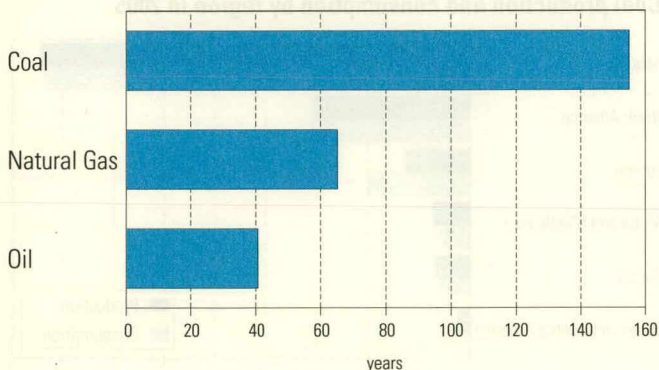
Source: BP statistical review of world energy June 2006

Oil production and consumption by region in 2005



Source: BP statistical review of world energy June 2006

World oil, natural gas and coal reserve sufficiency



Total reserves at the end of 2005: oil 152 800 million tonnes, natural gas 179 850 billion m³, coal 909 064 million tonnes.

Source: BP statistical review of world energy June 2006

Net heat contents and densities of energy sources

| Fuels | Unit | Net heat content | | Density |
|--------------------|----------------------------|------------------|------|------------------|
| | | GJ | MWh | t/m ³ |
| Crude oil | t | 41.8 | 11.6 | 0.86 |
| Heavy fuel oil | t | 41.1 | 11.4 | 0.98 |
| Light fuel oil | t | 42.7 | 11.9 | 0.85 |
| Diesel fuel | t | 42.8 | 11.9 | 0.85 |
| Jet fuel | t | 43.3 | 12.0 | 0.80 |
| Lamp kerosine | t | 43.0 | 11.9 | 0.80 |
| Other kerosines | t | 43.1 | 12.0 | 0.81 |
| Naphtha | t | 44.3 | 12.3 | 0.70 |
| Motor gasolines | t | 43.0 | 11.9 | 0.75 |
| Aviation gasolines | t | 43.7 | 12.1 | 0.71 |
| LPG | t | 46.2 | 12.8 | 0.51 |
| Refinery gases | t | 51.9 | 14.4 | |
| Hard coal | t | 25.5 | 7.1 | |
| Coke | t | 29.3 | 8.1 | |
| Anthracite | t | 33.5 | 9.3 | |
| Natural gas | 1 000 m ³ (0°C) | 36.0 | 10.0 | |
| Blast furnace gas | 1 000 m ³ | 3.8 | 1.1 | |
| Coke oven gas | 1 000 m ³ | 16.7 | 4.6 | |
| Town gas | 1 000 m ³ | 15.5 | 4.3 | |
| Black liquor | t (dry matter) | 11.7 | 3.3 | |
| Sulphite liquors | t (dry matter) | 12.0 | 3.3 | |
| Birch firewood | stacked m ³ | 5.4 | 1.5 | |
| Pine and spruce | stacked m ³ | 4.4 | 1.2 | |
| Mixed firewood | stacked m ³ | 4.5 | 1.3 | |
| Chips | loose m ³ | 3.3 | 0.9 | |
| Milled peat | t | 10.1 | 2.8 | 0.32 |
| Sod peat | t | 12.3 | 3.4 | 0.38 |

Conversion factors between energy units

| | toe | MWh | GJ | Gcal |
|------|---------|--------|--------|--------|
| toe | 1 | 11.63 | 41.868 | 10 |
| MWh | 0.086 | 1 | 3.6 | 0.86 |
| GJ | 0.02388 | 0.2778 | 1 | 0.2388 |
| Gcal | 0.1 | 1.163 | 4.1868 | 1 |

Example: 1 toe (tonne of oil equivalent) = 11.63 MWh

Prefix

| | | |
|----------|-------------|-------------------------|
| k = kilo | = 10^3 | = 1 000 |
| M = mega | = 10^6 | = 1 000 000 |
| G = giga | = 10^9 | = 1 000 000 000 |
| T = tera | = 10^{12} | = 1 000 000 000 000 |
| P = peta | = 10^{15} | = 1 000 000 000 000 000 |

Carbon dioxide factors for some fuels

| | g CO ₂ /MJ |
|-------------------------|-----------------------|
| Motor gasoline | 72.9 |
| Diesel fuel | 73.6 |
| Light fuel oil | 74.1 |
| Heavy fuel oil | 78.8 |
| Jet fuel | 73.2 |
| LPG | 65.0 |
| Other fuels | 71.3–78.8 |
| Hard coal | 94.6 |
| Coke | 108.0 |
| Natural gas | 55.04 |
| Milled peat | 105.9 |
| Bark, wood fuel | 109.6 |
| Industrial wood residue | 109.6 |
| Black liquor | 109.6 |

Note

Hydro power, wind power and imported electricity have been made commensurate with fuels according to directly obtained electricity (at the efficiency ratio of 100 per cent) and nuclear power at the efficiency ratio of 33 per cent.

Calculation method for heating energy

Net heating energy for buildings is calculated by subtracting boiler losses from fuels according to the following default efficiencies:

| | |
|--------------------------|------|
| Small combustion of wood | 55% |
| Peat | 60% |
| Coal | 60% |
| Heavy fuel oil | 83% |
| Light fuel oil | 78% |
| Natural gas | 90% |
| District heating | 100% |
| Electric heating | 100% |

Sources: Technical Research Centre of Finland (VTT) and Tampere University of Technology.

Explanation of symbols

| | |
|-------|---|
| .. | Data not available |
| — | Magnitude zero |
| 0 | Magnitude less than half of unit employed |
| * | Preliminary |
| ----- | Break in the time series |

Energy statistics by Statistics Finland

Preliminary energy statistics

(Energiaennakko)

Preliminary data on energy statistics.

Data published in March.

Energy statistics publication and EnergyCD

(Energiatilasto ja EnergyCD)

Annual publication containing detailed basic statistics on energy in Finland. Includes data on energy consumption and supply, consumption of electricity and district heat, foreign trade, energy prices and emissions etc.

Energy in Finland

Statistical pocketbook on energy statistics.

Internet www.stat.fi/energy

(www.tilastokeskus.fi/energia)

The updated statistics on consumption of hard coal, energy supply, consumption and prices as well as production of electricity and heat. Latest tables and figures.

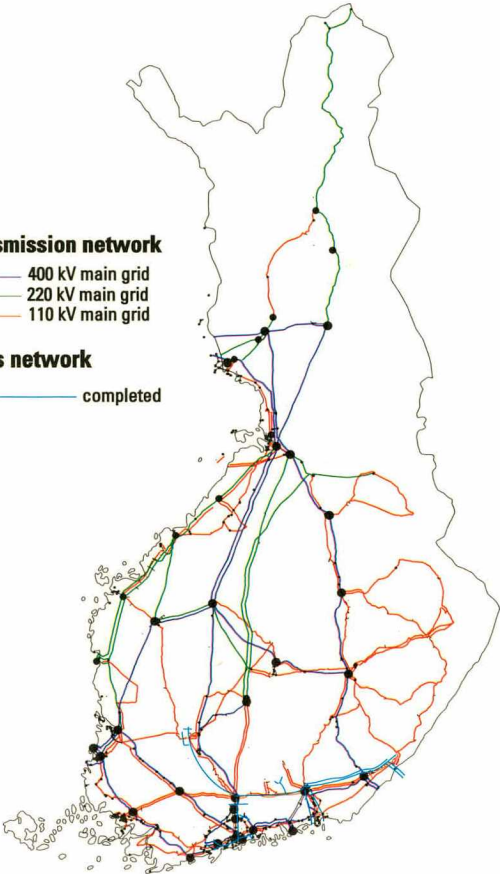
Power transmission and natural gas networks 2006

Power transmission network

- 400 kV main grid
- 220 kV main grid
- 110 kV main grid

Natural gas network

- completed



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